

FIG. 1
(PRIOR ART)

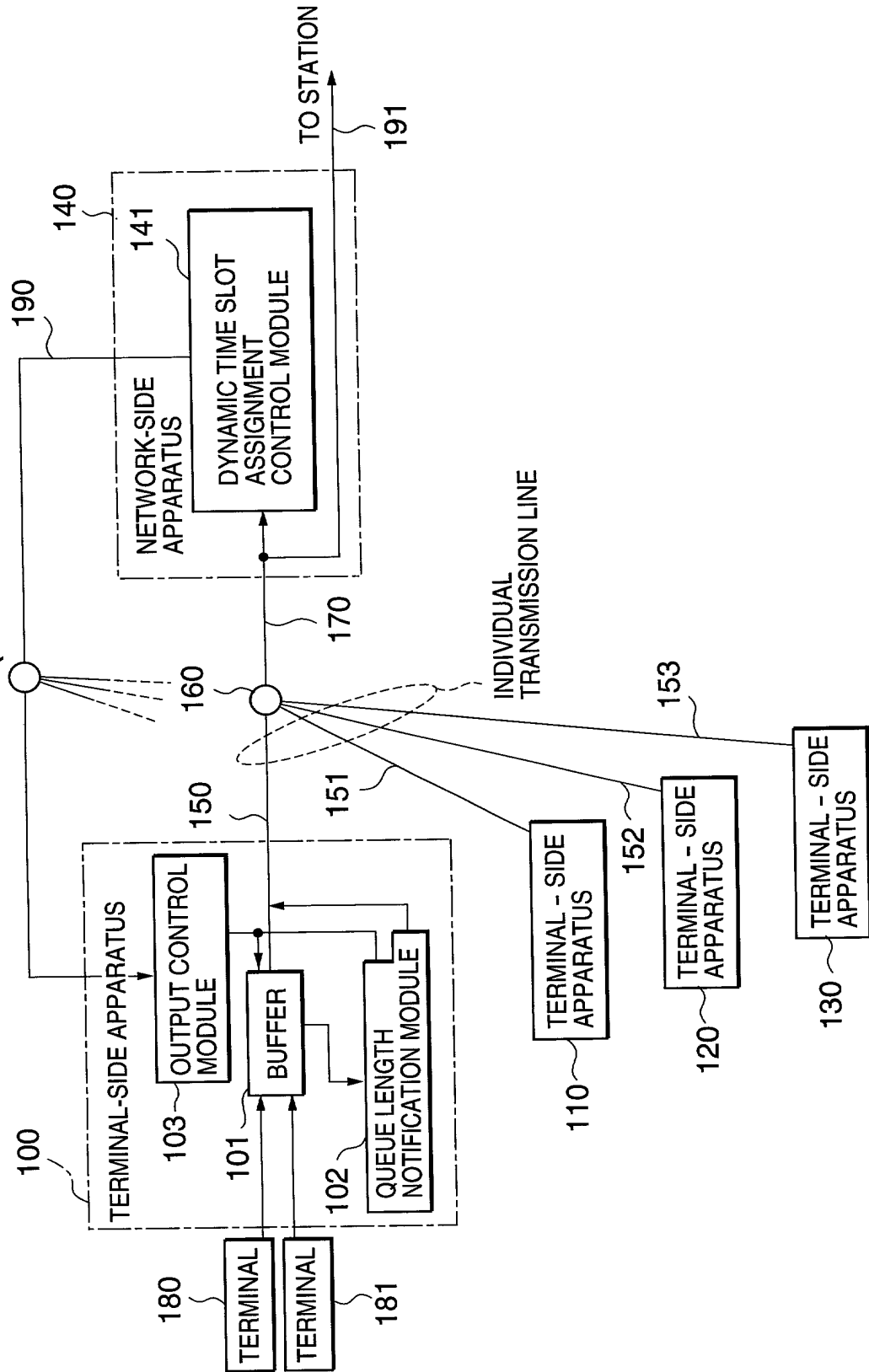


FIG.2
(PROIR ART)

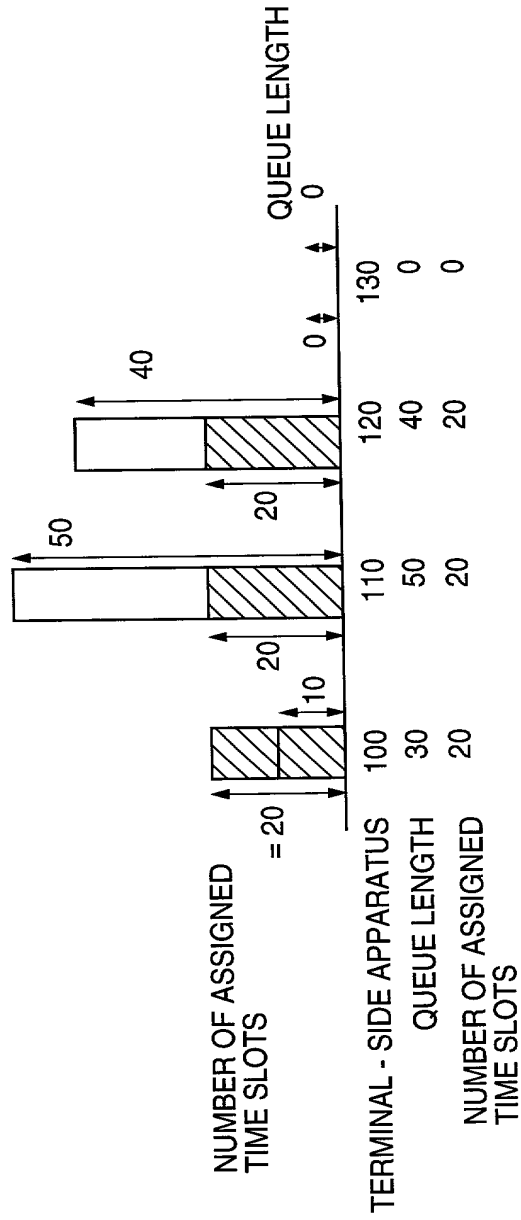


FIG.3

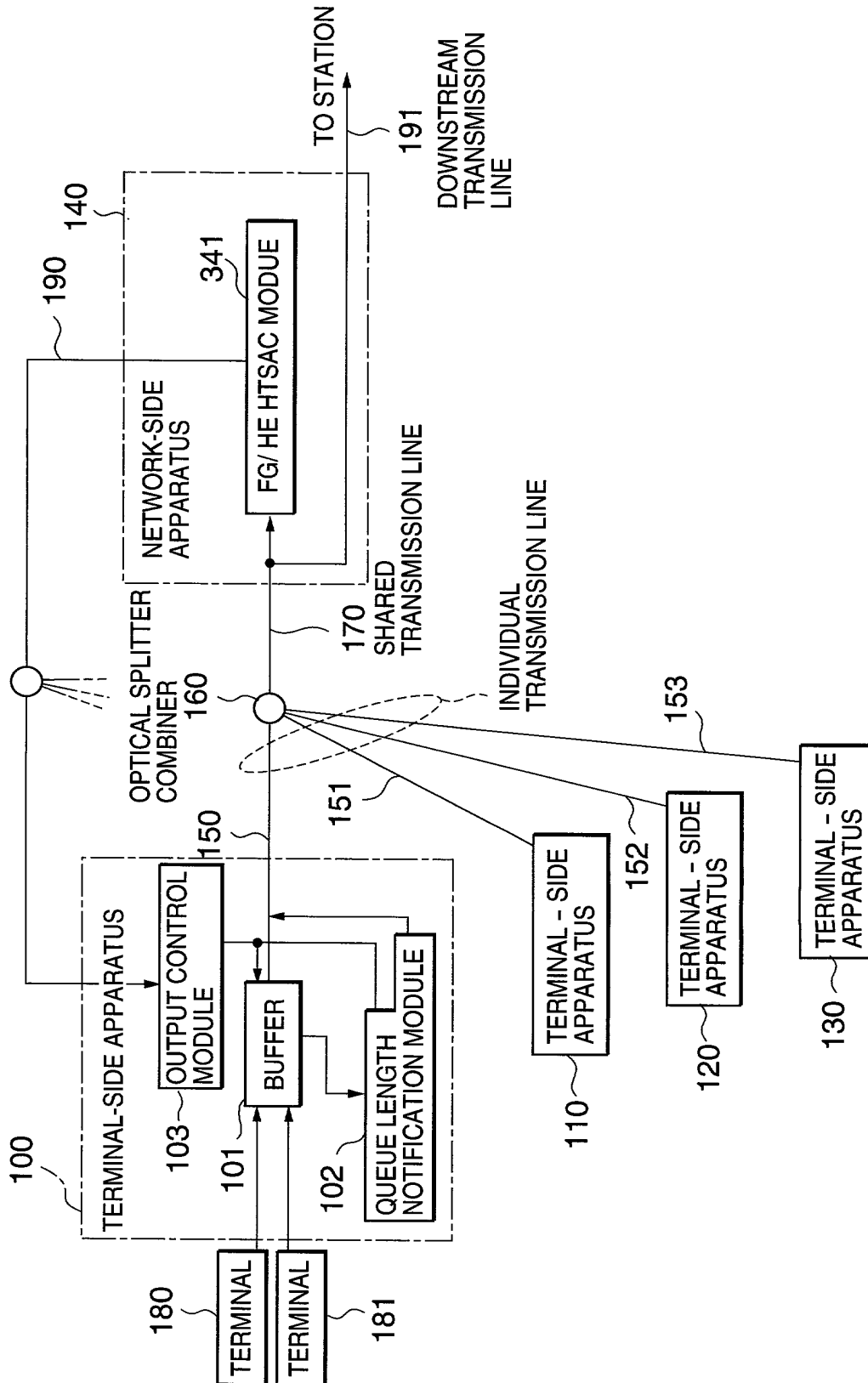


FIG.4

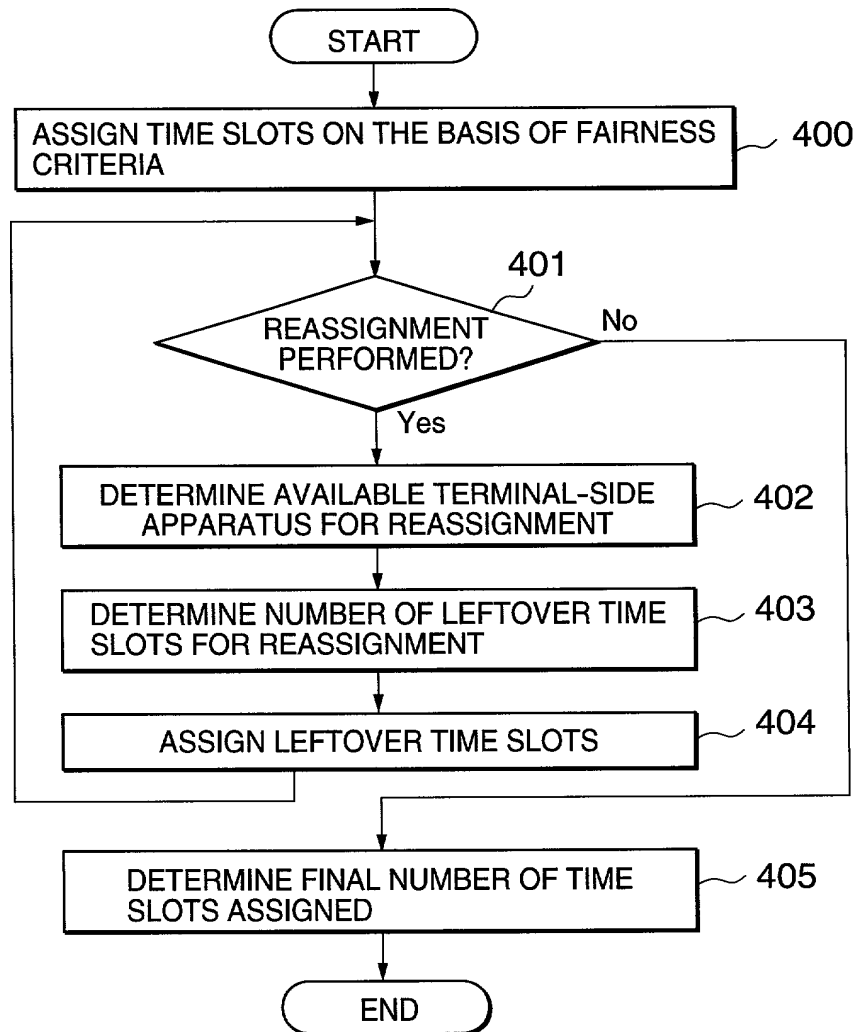


FIG.5

FAIRNESS CRITERIA
ASSIGN TIME SLOTS EQUALLY TO TERMINAL- SIDE APPARATUSES
ASSIGN TIME SLOTS IN PROPORTION TO SUM OF GUARANTEED MINIMUM BANDWIDTHS FOR CONNECTIONS IN TERMINAL - SIDE APPARATUSES
ASSIGN TIME SLOTS IN PROPORTION TO SUM OF MAXIMUM BANDWIDTHS FOR CONNECTIONS IN TERMINAL- SIDE APPARATUSES
ASSIGN TIME SLOTS IN PROPORTION TO DIFFERENCE BETWEEN SUM OF MAXIMUM BANDWIDTHS AND SUN OF GUARANTEED MINIMUM BANDWIDTHS FOR CONNECTIONS IN TERMINAL -SIDE APPARATUSES
ASSIGN TIME SLOTS IN PROPORTION TO NUMBER OF CONNECTIONS IN TERMINAL -SIDE APPARATUSES
ASSIGN A PART OF TOTAL TIME SLOTS EQUALLY TO TERMINAL-SIDE APPARATUSES AND THEN ASSIGN REMAINING TIME SLOTS IN PROPORTION TO SUM OF GUARANTEED MINIMUM BANDWIDTHS SUM OF MAXIMUM BANDWIDTHS,DIFFERENCE BETWEEN SUM OF MAXIMUM BANDWIDTHS AND SUM OF GUARANTEED MINIMUM BANDWIDTHS FOR CONNECTIONS IN TERMINAL-SIDE APPARATUSES ,OR IN PROPORTION TO NUMBER OF CONNECTIONS

FIG.6

REASSIGNMENT ALGORITHM
ASSIGN BASED ON THE FAIRNESS CRITERIA USED IN THE PRIMARY ASSIGNMENT(SEE FIG.5) FOR REASSIGNMENT (FAIRNESS ALGORITHM)
QUEUE LENGTH AVERAGING ASSIGNMENT SUCH THAT THE VALUE OBTAINED BY SUBTRACTING THE NUMBER OF THE PRIMARILY ASSIGNED TIME SLOTS FROM THE QUEUE LENGTH BECOMES EQUAL OR SIMILAR TO EACH OTHER IN THE AVAILABLE TERMINAL - SIDE APPARATUSES FOR REASSIGNMENT (DISTRIBUTED MINIMUM ALGORITHM)
ASSIGNMENT OF THE TIME SLOTS IN PROPORTION TO THE QUEUE LENGTH IN THE AVAILABLE TERMINAL SIDE APPARATUSES FOR REASSIGNMENT (PACKET RATIO ALGORITHM)

FIG.7A

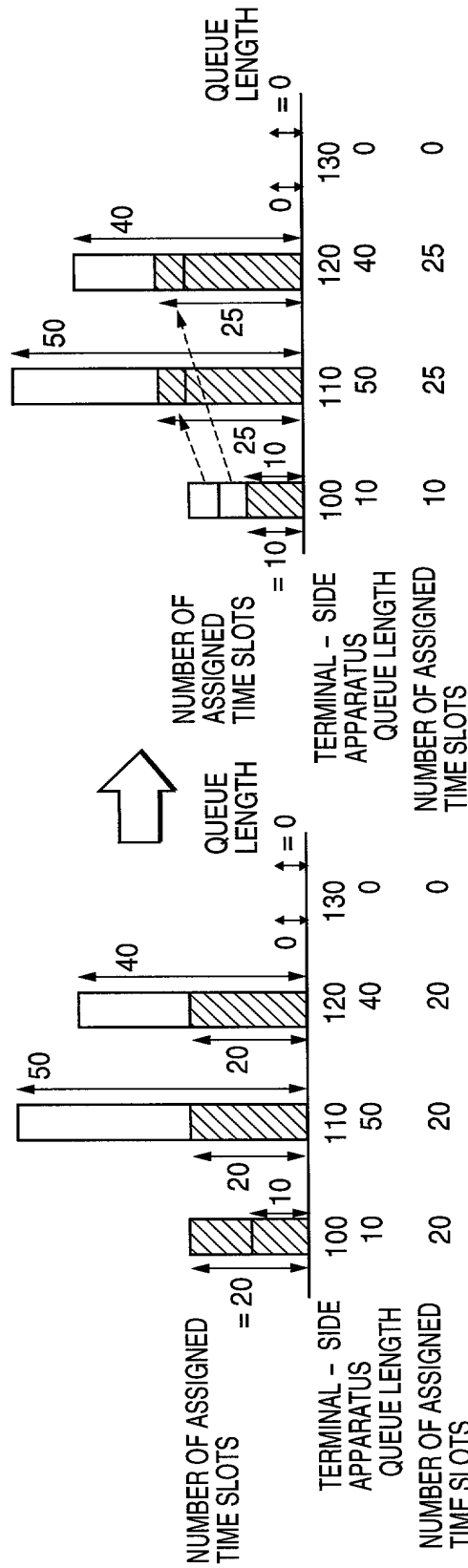


FIG.7B

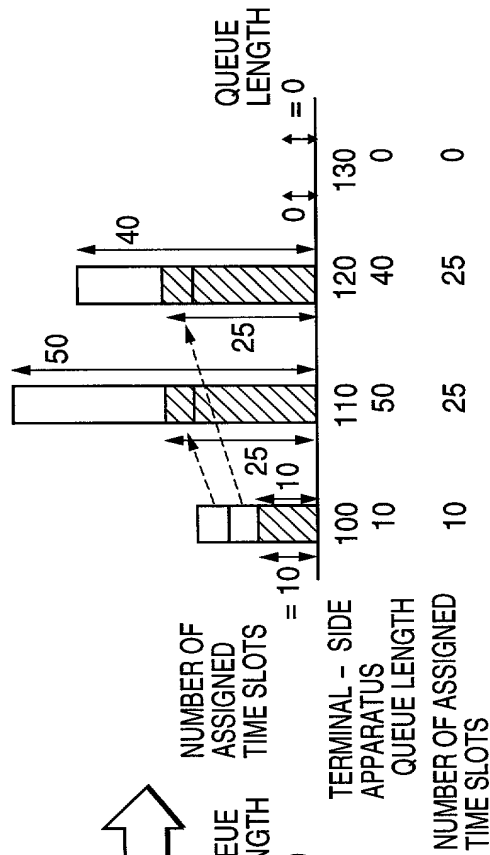


FIG.7C

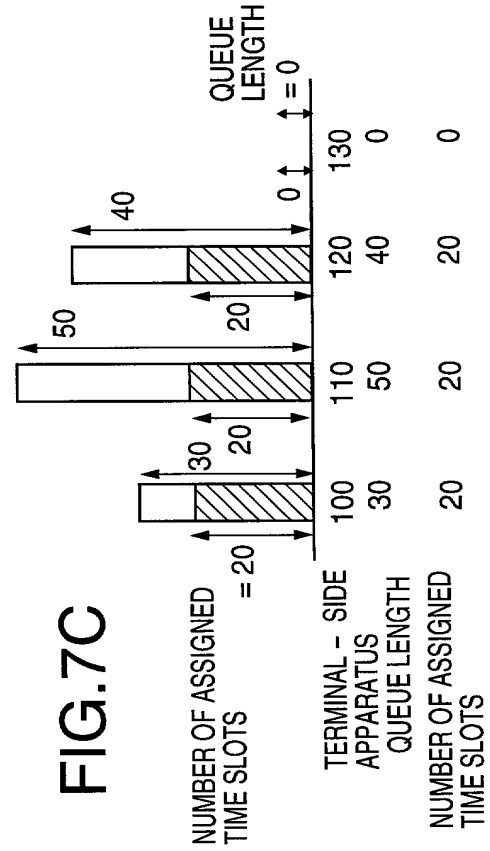


FIG.8A

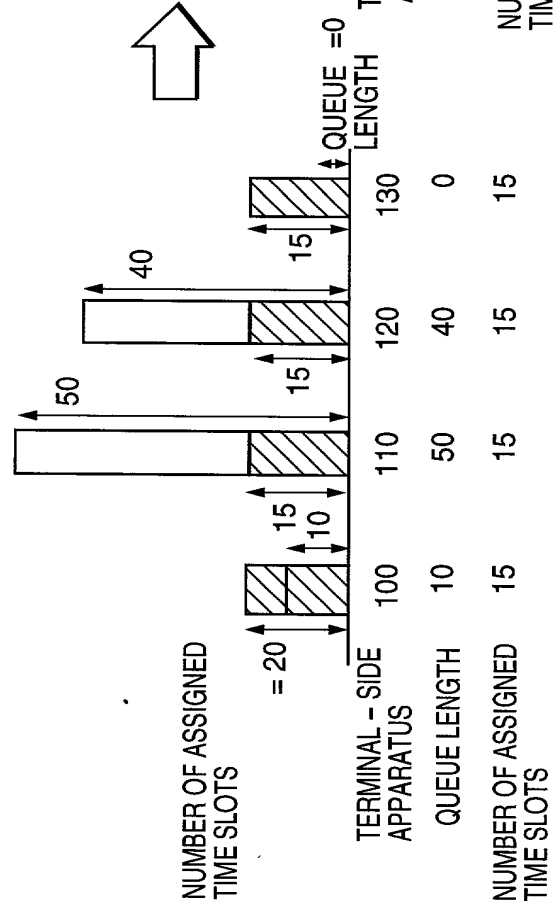


FIG.8B

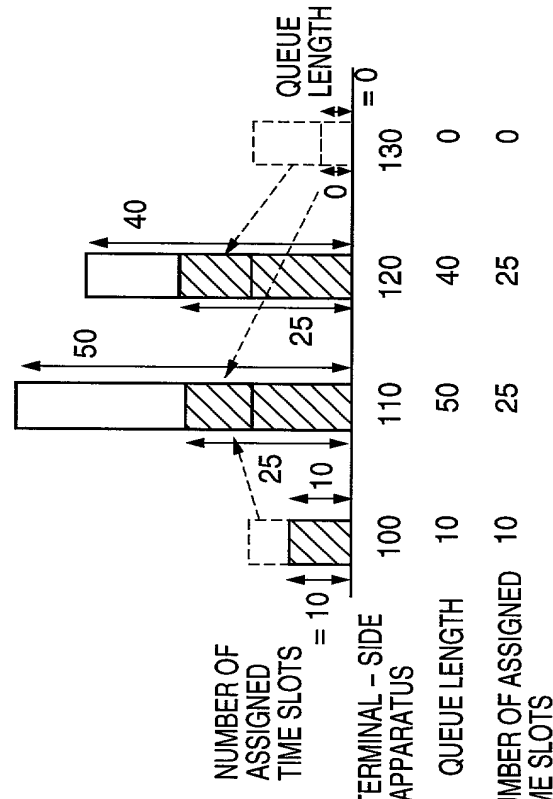
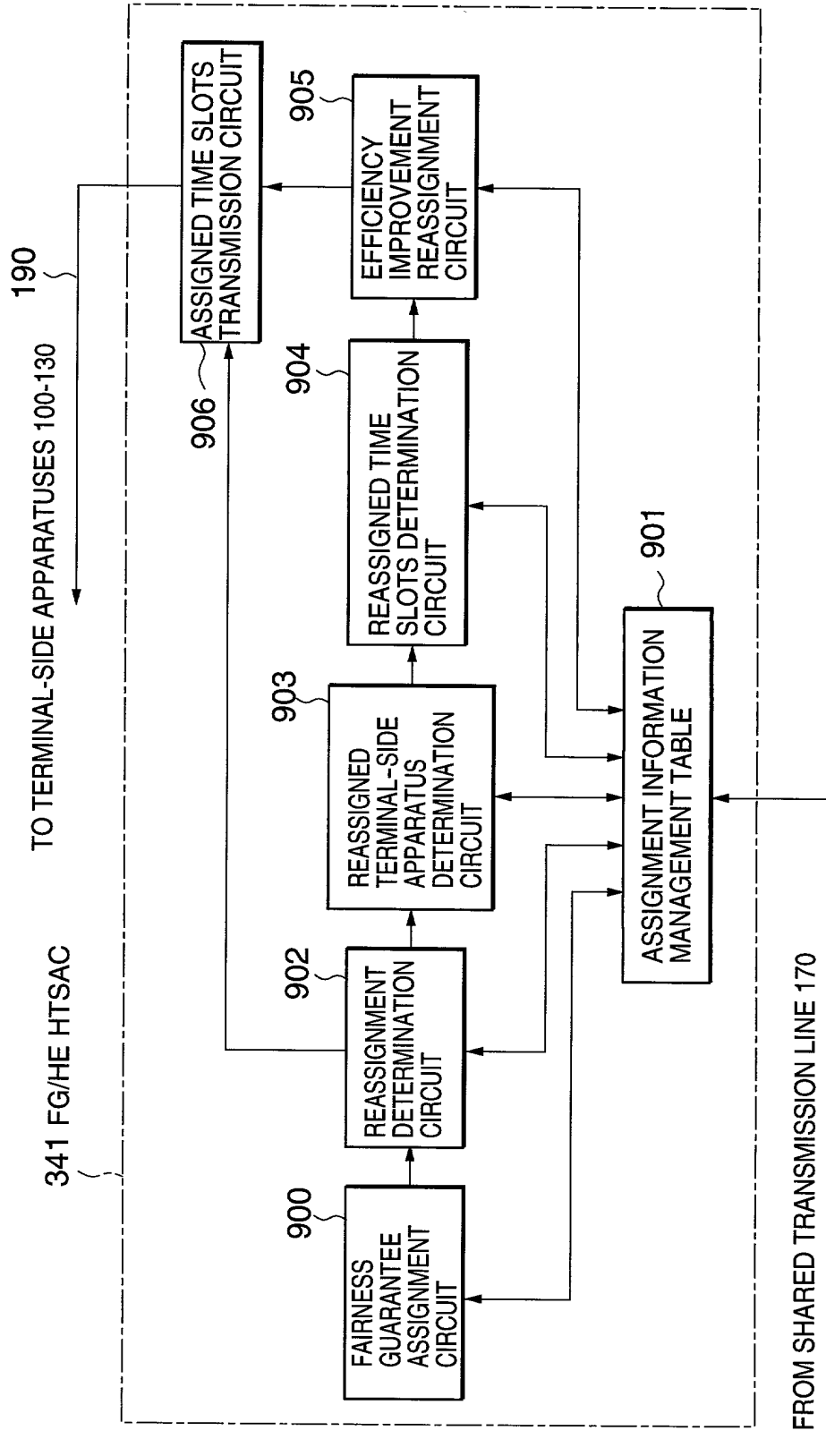


FIG.9



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QUEUE LENGTH FIELD 911		ASSIGNED TIME SLOTS FIELD 912		REASSIGNMENT FLAG FIELD 913
# OF TERMINAL - SIDE APPARATUS	QUEUE LENGTH	NUMBER OF TIME SLOTS ASSIGNED	AVAILABILITY FOR REASSIGNMENT	
100	10	15	NOT AVAILABLE	
110	50	15	AVAILABLE	
120	40	15	AVAILABLE	
130	0	15	NOT AVAILABLE	